

# Mineral Industry Surveys

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## SULFUR IN MAY 2004

During the month, production of recovered elemental sulfur was 780,000 metric tons, according to the U.S. Geological Survey. May production was about the same as April 2004 and May 2003. Shipments were virtually the same as those of April 2004. Producers' ending stocks for May 2004 were 182,000 tons.

Import and export data for May 2004 were not available at the time of publication and will be published in the Sulfur in June 2004 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for April 2004 were

estimated to be 239,000 tons; exports were 107,000 tons. Imports of sulfuric acid for April 2004 were 221,000 tons; exports were 11,000 tons.

Significant adjustments have been made to the sulfur import data. Reports from the U.S. Census Bureau appear to underreport sulfur imports especially material from Canada. The revised figures are based on Census information, data and personal communications with industry experts. Better strategies for estimating import data from Canada are being explored.

TABLE 1  
SALIENT SULFUR STATISTICS<sup>1</sup>

(Thousand metric tons)

Period	Production			Shipments, all sources
	Petroleum <sup>2</sup>	Natural gas	Total	
2003:				
January-December	6,970	1,950	8,920	8,910
January-May	2,940	833	3,770	3,740
May	625	148	773	769
June	543	145	688	680
July	601	154	755	760
August	553	169	722	723
September	544	154	698	708
October	548	166	714	715
November	615	160	775	783
December	630	168	798	804
2004:				
January	577	165	742	762
February	525	155	680	691
March	597	176	773	782
April <sup>r</sup>	609	161	771	770
May <sup>p</sup>	604	176	780	774
Total	2,910	833	3,750	3,780

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes a small quantity from coking operations.

TABLE 2  
U.S. IMPORTS OF SULFUR<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Total, all countries <sup>2</sup>	
	Quantity <sup>e</sup>	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	Quantity <sup>e</sup>	Value <sup>3</sup>
2003:						
January-December	2,080	32,000	535	26,500	2,810	69,100
January-April	740	9,430	178	8,820	918	18,900
April	190	2,950	44	2,380	234	5,230
May	200	4,160	45	2,530	266	7,760
June	180	2,940	44	2,410	241	6,270
July	160	2,440	45	2,180	241	6,390
August	160	2,040	45	1,940	267	4,820
September	160	2,910	44	2,070	213	6,160
October	160	2,460	49	2,470	229	5,760
November	160	2,850	45	2,170	205	6,860
December	160	2,770	40	1,960	230	6,180
2004:						
January	160	1,720	50	2,400	247	5,850
February	160	3,130	35	3,050	225	7,930
March	170 <sup>r</sup>	3,660	25	2,570	215 <sup>r</sup>	7,210
April <sup>e</sup>	140	3,060	54	2,550	239	8,040
Total	630	11,600	164	10,600	926	29,000

<sup>e</sup>Estimated. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

Sources: U.S. Census Bureau data as adjusted by U.S. Geological Survey and PentalSul North America Sulphur Service.

TABLE 3  
U.S. IMPORTS OF SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Canada			Europe			Total, all countries <sup>2</sup>		
	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>	Quantity	Sulfur content	Value <sup>3</sup>
2003:									
January-December	387	126	16,200	266	86	5,870	905	298	28,800
January-April	154	51	5,820	73	23	1,630	241	80	8,940
April	44	14	1,680	--	--	--	54	18	2,200
May	34	11	1,320	29	10	638	75	25	2,710
June	26	8	963	40	13	1,350	84	27	2,770
July	23	8	1,020	19	6	318	82	27	1,950
August	19	6	980	74	24	751	103	34	2,410
September	22	7	1,150	9	3	382	70	23	2,230
October	35	11	1,520	1	(4)	36	104	34	1,550
November	33	11	1,590	1	(4)	36 <sup>e</sup>	71	23	3,350
December	41	13	1,880	20	7	734	75	25	2,900
2004:									
January	97	32	3,930	--	--	--	114	37	4,610
February	179	58	7,480	21	7	488	204	69	8,450
March	167	54	6,760	6	2	163	176	58	7,280
April	203	66	7,710	14	5	344	221	72	8,410
Total	646	210	25,900	41	14	995	715	236	28,800

<sup>e</sup>Estimated. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include other countries not listed.

<sup>3</sup>Declared customs valuation.

<sup>4</sup>Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 4  
U.S. EXPORTS OF SULFUR AND SULFURIC ACID<sup>1</sup>

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value <sup>2</sup>	Quantity	Sulfur content	Value <sup>2</sup>
2003:					
January-December	742	46,100	207	68	18,800
January-April	302	14,900	51	16	5,310
April	94	4,030	12	4	1,430
May	41	2,430	22	7	1,610
June	70	6,650	21	7	1,790
July	55	4,700	28	10	2,430
August	57	2,190	27	9	2,060
September	50	2,090	23	7	1,910
October	72	4,360	12	4	1,200
November	27	4,880	12	4	1,170
December	67	3,920	12	4	1,360
2004:					
January	18	1,740	10	3	1,120
February	6	1,530	13	4	1,520
March	84	5,930	14	5	3,190
April	107	6,550	11	4	1,380
Total	215	15,700	48	16	7,210

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Declared f.a.s. (free alongside ship) valuation.

Source: U.S. Census Bureau.

TABLE 5  
U.S. CONSUMPTION OF SULFUR<sup>1</sup>

(Thousand metric tons)

Period	Domestic sources <sup>2</sup>	Imports <sup>c</sup>	Consumption
2003:			
January-December	8,170	2,810	11,000
January-April	3,480	888	4,370
April	716	234	950
May	728	266	994
June	610	241	851
July	705	241	946
August	666	267	933
September	658	213	871
October	643	229	872
November	756	205	961
December	731	230	961
2004:			
January	744	247	991
February	685	225	910
March	698	215 <sup>r</sup>	913 <sup>r</sup>
April	663	239	902
Total	2,790	926	3,720

<sup>c</sup>Estimated. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Calculated as shipments minus exports.

TABLE 6  
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,  
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT<sup>1</sup>

(Thousand metric tons)

District and source	May 2004 <sup>p</sup>		April 2004		Total 2004 <sup>2</sup>		Year to date 2003 <sup>2</sup>	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	19	19	19	19	98	99	88 <sup>r</sup>	89 <sup>r</sup>
Natural gas	2	2	2	2	9	9	11	10
Total	21	21	21	21	107	108	98 <sup>r</sup>	99 <sup>r</sup>
PAD 2:								
Petroleum and coke	66	66	68	70	348	358	383 <sup>r</sup>	375 <sup>r</sup>
Natural gas	9	9	4	4	24	24	17	18
Total	75	75	71	74	372	382	400 <sup>r</sup>	393 <sup>r</sup>
PAD 3: <sup>3</sup>								
Petroleum and coke	410	708	408 <sup>r</sup>	407 <sup>r</sup>	1,940	1,960	1,870 <sup>r</sup>	1,880 <sup>r</sup>
Natural gas	44	43	43 <sup>r</sup>	43 <sup>r</sup>	223	224	224 <sup>r</sup>	223 <sup>r</sup>
Total	454	452	451 <sup>r</sup>	449 <sup>r</sup>	2,160	2,180	2,090 <sup>r</sup>	2,100 <sup>r</sup>
PAD 4 and 5: <sup>4</sup>								
Petroleum and coke	110	107	114 <sup>r</sup>	118 <sup>r</sup>	529	538	597 <sup>r</sup>	572 <sup>r</sup>
Natural gas	121	120	113 <sup>r</sup>	108 <sup>r</sup>	577	573	581 <sup>r</sup>	579 <sup>r</sup>
California	83	79	82 <sup>r</sup>	83 <sup>r</sup>	391	394	472 <sup>r</sup>	454 <sup>r</sup>
Total	231	227	227 <sup>r</sup>	226 <sup>r</sup>	1,110	1,110	1,180 <sup>r</sup>	1,150 <sup>r</sup>
Grand total	780	774	771 <sup>r</sup>	770 <sup>r</sup>	3,750	3,780	3,770 <sup>r</sup>	3,740 <sup>r</sup>

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include revisions to prior months.

<sup>3</sup>Includes the U.S. Virgin Islands.

<sup>4</sup>Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7  
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS<sup>1</sup>

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	2004			2003
	May	April	Year to date	total
Production	9.21	9.41 <sup>r</sup>	9.02 <sup>r</sup>	8.92
Shipments	9.14	9.39 <sup>r</sup>	9.10 <sup>r</sup>	8.91
Exports of sulfur	NA	1.31	0.65	0.74
Imports of sulfur:				
Canada	NA	1.71 <sup>e</sup>	1.91 <sup>e</sup>	2.08
Mexico	NA	0.66	0.50	0.54
Total <sup>2</sup>	NA	2.92 <sup>e</sup>	2.80 <sup>e</sup>	2.81
Export of H <sub>2</sub> SO <sub>4</sub>	NA	0.13	0.15	0.21
Import of H <sub>2</sub> SO <sub>4</sub> :				
Canada	NA	2.48	1.95	0.39
Europe	NA	0.17	0.12	0.27
Total <sup>2</sup>	NA	2.70	2.16	0.91
Consumption: <sup>3</sup>				
Domestic sources	NA	8.09	8.44	8.18
Imports	NA	2.92 <sup>e</sup>	2.80 <sup>e</sup>	2.81
Total	NA	11.00	11.20	11.00
Sulfur export values <sup>4</sup>	NA	\$61	\$73	\$62
Sulfur import values: <sup>4</sup>				
Canada	NA	\$22	\$18	\$15
Mexico	NA	\$47	\$65	\$50
Average	NA	\$34	\$31	\$25
H <sub>2</sub> SO <sub>4</sub> export values <sup>4</sup>	NA	\$125	\$150	\$91
H <sub>2</sub> SO <sub>4</sub> import values: <sup>4</sup>				
Canada	NA	\$38	\$40	\$42
Europe	NA	\$25	\$24	\$22
Average	NA	\$38	\$40	\$32

<sup>e</sup>Estimated. <sup>r</sup>Revised. NA Not available.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes other countries not listed.

<sup>3</sup>Because May trade data were not available, May consumption was not determined.

<sup>4</sup>Average value per ton for most recent data available.